Kengo Matsumoto: Continuous orbit equivalence of topological Markov shifts (1), (2)

Isomorphism classes of Cuntz–Krieger algebras are closely related to continuous orbit equivalence classes of one-sided topological Markov shifts. Relations among ontinuous orbit equivalence, flow equivalence, zeta functions, full groups of topological shifts and Cuntz–Krieger algebras are discussed.

In the first part (1), I will give a survey on the following joint papers with Hiroki Matui

[1] K. Matsumoto and H. Matui, *Continuous orbit equivalence of topological Markov shifts and Cuntz–Krieger algebras*, Kyoto J. Math. **54**(2014) 863–878.

[2] K. Matsumoto and H. Matui, *Continuous orbit equivalence of topological Markov shifts and dynamical zeta functions*, preprint, arXiv:1403.0719, to appear in Ergodic Theory Dynam. Systems.

[3] K. Matsumoto and H. Matui, *Full groups of Cuntz–Krieger algebras and Higman–Thompson groups*, preprint arXiv:1409.4838.

The following papers are also closely related to my talk:

[4] M. Boyle and D. Handelman, *Orbit equivalence, flow equivalence and ordered cohomology*, Israel J. Math. **95**(1996), pp. 169–210.

[5] J. Cuntz and W. Krieger, *A class of C^*-algebras and topological Markov chains*, Invent. Math. **56**(1980), pp. 251–268.

[6] J. Franks, *Flow equivalence of subshifts of finite type*, Ergodic Theory Dynam. Systems **4**(1984), pp. 53–66.

[7] K. Matsumoto, *Orbit equivalence of topological Markov shifts and Cuntz–Krieger algebras*, Pacific J. Math. **246**(2010), 199–225.

[8] K. Matsumoto, *Classification of Cuntz–Krieger algebras by orbit equivalence of topological Markov shifts*, Proc. Amer. Math. Soc. **141**(2013), pp. 2329–2342.

[9] K. Matsumoto, *Full groups of one-sided topological Markov shifts*, Israel J. Math. **205**(2015), 1–33

[10] H. Matui, *Homology and topological full groups of étale groupoids on totally disconnected spaces*, Proc. London Math. Soc. **104**(2012), pp. 27–56.

[11] H. Matui, *Topological full groups of one-sided shifts of finite type*, J. Reine Angew. Math. **705**(2015), 35–84.

[12] J. Renault, *A groupoid approach to C^*-algebras*, Lecture Notes in Math. 793, Springer-Verlag, Berlin, Heidelberg and New York (1980).

[13] M. Rørdam, *Classification of Cuntz-Krieger algebras*, K-theory **9**(1995), pp. 31–58.

In the second part (2), I will talk about strongly continuous orbit equivalence of one-sided topological Markov shifts and gauge actions on Cuntz-Kreiger algebras.

Related papers are the following

[14] K. Matsumoto, *Strongly continuous orbit equivalence of one-sided topological Markov shifts*, preprint, arXiv:1408.4501v1, to appear in J. Operator Theory

[15] K. Matsumoto, *Continuous orbit equivalence, flow equivalence of Markov shifts and torus actions on Cuntz–Krieger algebras*, preprint, arXiv:1501.06965v3